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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/637,139

08/08/2003

Charles J. Longacre

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3431

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7590

01/27/2006

CAESAR, RIVISE, BERNSTEIN,  
 COHEN & POKOTILOW, LTD.  
 11TH FLOOR, SEVEN PENN CENTER  
 1635 MARKET STREET  
 PHILADELPHIA, PA 19103-2212

EXAMINER

DUNWOODY, AARON M

ART UNIT

PAPER NUMBER

3679

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/637,139	<b>Applicant(s)</b> LONGACRE ET AL.	
	<b>Examiner</b> Aaron M. Dunwoody	<b>Art Unit</b> 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 and 9-14 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 6173993, Shumard et al.

In regards to claim 1, Shumard et al disclose a joint restraint assembly (10) comprising:

a body (14) encircling the pipe, with the body having a plurality of cavities (34) adjacent the pipe and at least one set of a corresponding plurality of threaded bores (20) disposed through the body, each threaded bore of the at least one set of a corresponding plurality of threaded bores being in communication with a respective cavity;

a segment (40) disposed within each of the cavities in the body, the segment comprising a first portion (46) that contacts a surface (28) of the cavity and a second portion (52) that penetrates the outer surface of the pipe, the segment pivoting about the first portion, which maintains contact with the surface of the cavity throughout increasing mechanical or internal pressure load applied to the pipe, for driving the second portion deeper into the outer surface of the pipe in proportion to the applied mechanical or internal pressure loading, the segment resisting pipe pull-out in

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proportion to the increased mechanical or internal pressure loading applied to the pipe increases.

In regards to claim 2, Shumard et al disclose a threaded bolt (32) extending through each of the threaded bores, the threaded bolt displaces the segment so that the second portion initially engages the outer surface of the pipe, and wherein the segment pivots about the first portion while losing contact with the threaded bolt.

In regards to claim 3, Shumard et al disclose the segment transmitting the load from the pipe to the body while loading the segment primarily in compression.

In regards to claim 4, Shumard et al disclose the second portion comprising at least one edge (52, 54) which penetrates the external surface of the pipe.

In regards to claim 5, Shumard et al disclose the at least one edge forming a relief angle, as measured from the outer surface of the pipe, that is 25 to 35 degrees (implied).

In regards to claim 6, Shumard et al disclose the circumferential length of all of the segments and their edges comprising a substantial portion of the pipe periphery.

In regards to claim 7, Shumard et al disclose the shape of the body being optimized to resist the forces imparted to by contact with the segments, the body comprising: a substantially cylindrical portion adjacent to the pipe surface with flange extending radially therefrom; and wherein the body comprising a shape and wall thickness that compensates for the presence of the cavities for maintaining the strength and rigidity of the body.

In regards to claim 9, Shumard et al disclose a joint restraint assembly (10) comprising:

a body (14) encircling the pipe, with the body having a plurality of cavities (34) adjacent the pipe and at least one set of a corresponding plurality of threaded bores (20) disposed through the body, each threaded bore of the at least one set of a corresponding plurality of threaded bores being in communication with a respective cavity;

a segment (40) disposed within each of the cavities in the body, the segment comprising a first portion (46) that contacts a surface (28) of the cavity and a cam surface (52) that engages and rotates against, but does not substantially penetrate, the outer surface of the pipe, the segment pivoting about the first portion, which maintains contact with the surface of the cavity throughout increasing mechanical or internal pressure loading applied to the pipe so that the cam surface rotates against the outer surface of the pipe in proportion to the applied mechanical or internal pressure loading, the segment resisting pipe pull-out to the increased mechanical or internal pressure loading applied to the pipe.

In regards to claims 10 and 13, Shumard et al disclose a threaded bolt (32) extending through each of the threaded bores, the threaded bolt displaces the segment so that the second portion initially engages the outer surface of the pipe, and wherein the segment pivots about the first portion while losing contact with the threaded bolt.

In regards to claim 11, Shumard et al disclose the segment transmitting the load from the pipe to the body while loading the segment primarily in compression.

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In regards to claim 12, Shumard et al disclose a cam surface further comprising a surface texture for engaging the pipe surface.

In regards to claim 14, Shumard et al disclose the segment transmitting the load from the pipe to the body while loading the segment primarily in compression.

In regards to claims 19 and 20, Shumard et al disclose the first portion comprising a corner opposite the at least one edge, the corner contacting the surface of the cavity.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shumard et al in view of Pannell et al.

In regards to claim 8, Shumard et al disclose the claimed invention except for an elastomeric material positioned between each of the segments and their corresponding cavities, the elastomeric material disposing the segment in the cavity in an optimum position. Pannell et al teach an elastomeric material (170) positioned between each of the segments (210) and their corresponding cavities, the elastomeric material disposing the segment in the cavity in an optimum position, to graduate the effecting force of the sudden application of a sliding force (col. 4, lines 25-40). As Pannell et al relate to mechanical pipe joints utilizing pipe clamping systems, it would have been obvious to

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one having ordinary skill in the art at the time the invention was made to provide an elastomeric material positioned between each of the segments and their corresponding cavities, the elastomeric material disposing the segment in the cavity in an optimum position, to graduate the effecting force of the sudden application of a sliding force, as taught by Pannell et al.

### ***Response to Arguments***

Applicant's arguments filed 11/2/2005 have been fully considered but they are not persuasive.

Applicant argues that Shumard et al '993 do not disclose a segment disposed within each of the cavities in the body, the segment comprising a first portion that contacts a surface of the cavity and a second portion that penetrates the outer surface of the pipe, the segment pivoting about the first portion, which maintains contact with the surface of the cavity throughout increasing mechanical or internal pressure load applied to the pipe, for driving the second portion deeper into the outer surface of the pipe in proportion to the applied mechanical or internal pressure loading, the segment resisting pipe pull-out in proportion to the increased mechanical or internal pressure loading applied to the pipe increases. The Examiner disagrees. In Figure 5, Shumard et al clearly illustrates a segment (40) disposed within each of the cavities in the body, the segment comprising a first portion (46) that contacts a surface (28) of the cavity and a second portion (52) that penetrates the outer surface of the pipe, the segment pivoting about the first portion, which maintains contact with the surface of the cavity throughout increasing mechanical or internal pressure load applied to the pipe, for driving the

second portion deeper into the outer surface of the pipe in proportion to the applied mechanical or internal pressure loading, the segment resisting pipe pull-out in proportion to the increased mechanical or internal pressure loading applied to the pipe increases.

Applicant argues Shumard et al do not disclose the segment transmitting the load from the pipe to the body while loading the segment primarily in compression. The Examiner disagrees. In Figure 5, Shumard et al clearly illustrate the segment transmitting the load from the pipe to the body while loading the segment primarily in compression.

The Applicant argues that Shumard et al do not disclose a segment disposed within each of the cavities in the body, the segment comprising a first portion that contacts a surface of the cavity and a cam surface that engages and rotates against, but does not substantially penetrate, the outer surface of the pipe, the segment pivoting about the first portion, which maintains contact with the surface of the cavity throughout increasing mechanical or internal pressure loading applied to the pipe so that the cam surface rotates against the outer surface of the pipe in proportion to the applied mechanical or internal pressure loading, the segment resisting pipe pull-out to the increased mechanical or internal pressure loading applied to the pipe. The Examiner disagrees. In Figure 5, Shumard et al clearly illustrates a segment (40) disposed within each of the cavities in the body, the segment comprising a first portion (46) that contacts a surface (28) of the cavity and a cam surface (52) that engages and rotates against, but does not substantially penetrate, the outer surface of the pipe, the segment pivoting



about the first portion, which maintains contact with the surface of the cavity throughout increasing mechanical or internal pressure loading applied to the pipe so that the cam surface rotates against the outer surface of the pipe in proportion to the applied mechanical or internal pressure loading, the segment resisting pipe pull-out to the increased mechanical or internal pressure loading applied to the pipe.

Further, Applicant's and Shumard et al's Figure 5 both illustrate the same claim limitation regarding penetration.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M. Dunwoody whose telephone number is 571-272-7080. The examiner can normally be reached on 7:30 am - 4:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Aaron M Dunwoody  
Primary Examiner  
Art Unit 3679

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